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Interdisciplinary Research in Business Communication: Methods for Dealing with Intangibles and Human-centred Sustainability

La investigación interdisciplinar en la comunicación de empresa: métodos para abordar los intangibles y la sostenibilidad centrada en el ser

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Abstract:
The aim of this research is to ascertain the need for an interdisciplinary methodology both for the study of business communication in the field of sustainability, and in the subsequent transfer of knowledge for the contribution to the operational response in safeguarding human life. To this end, the methodology used has started from a first approach to the hypothesis of the useful society and the sustainable society based on Ritzer, and the use of the terms in question applied to business communication, and then, taking into consideration the example of some techniques and methodologies used, some specific and others interdisciplinary, to verify the greater contribution of the latter in the transfer of significant knowledge for the advance towards sustainability. The results obtained have shown how reductionist and subjugated to the economy of the usefulness of some research and methodologies used based on the purely quantitative and the contribution of interdisciplinary methodologies more akin to the knowledge and transfer necessary. After the results obtained, there is an urgent need for a new discussion, discovered now more than ever, of the interdisciplinary in the research method in the field of communication in general and business communication, with the contribution of the study of the intangible to achieve the contribution of the operative towards sustainability, although this will involve greater costs in terms of time, but also greater benefits.

Keywords:
Interdisciplinary research; business communication; ethical communication; sustainability; intangibles; knowledge transfer

Resumen:
El objetivo de esta investigación es constatar la necesidad de una metodología interdisciplinar tanto para el estudio de la comunicación de empresa en el ámbito de la sostenibilidad, como en la posterior transferencia del conocimiento para la contribución a la respuesta operativa en la salvaguardia de la vida humana. Para ello la metodología empleada ha partido de un primer planteamiento de la hipótesis sobre la sociedad útil y la sociedad sostenible basados en Ritzer, y el uso de los términos en cuestión aplicados a la comunicación de empresa, para posteriormente, tomado en consideración el ejemplo de algunas técnicas y metodologías empleadas algunas específicas y otras interdisciplinares, verificar la contribución mayor de las segundas en la transferencia del conocimiento significativo para el avance hacia la sostenibilidad centrada en el ser humano. Los resultados obtenidos han demostrado lo reduccionista y subyugado a la economía de lo útil de algunas investigaciones y metodologías empleadas basadas en lo puramente cuantitativo y estanco, como la aportación de metodologías interdisciplinares más afines con el conocimiento y la transferencia del conocimiento necesaria. Tras los resultados obtenidos se abre la impelente necesidad de una nueva discusión, descubierta ahora más que nunca, de lo interdisciplinar en el método de investigación en el campo de la comunicación en general y de la comunicación de empresa en particular, con el aporte del estudio de lo intangible para el logro de la contribución de la operativa hacía la sostenibilidad, aunque esto supondrá mayores costes de tiempo, pero también mayores beneficios.

Palabras clave:
Investigación interdisciplinar; comunicación empresarial; comunicación ética; sostenibilidad; intangibles; transferencia de conocimiento

1. Introduction

In the development of a useful society, in which the value of things and people is measured by how much it yields in benefits (Ritzer, 1997), the measurable quantity is an immeasurable value. Data collection becomes a priority; data traffic, and even data theft, has a justified purpose: to get to know the reality in terms of benefits, at least apparently. However, it should not be forgotten that these data are not a panacea and that the questions and searches themselves can determine the results. Even so, the numerical transcription of reality, carried out through technologies and ad hoc tools, reassures, and encompasses things in an order and knowledge that is easier to master than open questions or the use of human logic itself. From these dynamics arises the need for research capable of measuring, in which quantitative and even qualitative methodology, reconverted into numbers and percentages, respond not only to the ability to understand through surveys and the collection of large volumes of data, but also to finally shape reality in these data. This recalls the story of the turkey transcribed in The Problems of Philosophy (Russell, 1912) in which a turkey, due to a question of numbers, concluded that every day at a certain time he was fed, until one day at the same time he had calculated, instead of feeding him, he was killed.

Data based on a purely numerical logic can take us away from something so full of variables and aspects of another intangible, emotional or other non-quantifiable nature. It is this other research approach and the consequent transfer of knowledge that can bring us closer to a sustainable society, one that is not based on numbers, on the material, on what is useful, but on what is deeply and truly necessary. The sustainable society may even be on the opposite path to the immediately useful. There are some examples of research that tries to quantify, with the creation of new measures, the benefits that for example more sustainable energies can bring to the ecosystem, beyond the efficiency of productive systems; this would be what has been called *emergia*, a tool to make useful what privileges the sustainable, and the need for there to be research that is implemented with biophysical methodologies that take into account this tool (Torres-Verzagas et al., 2019).

These interdisciplinary methodologies need more development time and this is one of the strong impediments since time is precisely one of the great current losses in research; in these terms, it could be proposed that as the study of sustainability advances, methodologies understood also in terms of sustainability should advance. A priority would be the recovery of the development times of research itself, as well as those of any area of production and social consumption.

In music, the term *sostenuto* can imply a slowing down of time and execution; it is one of the terms to know the right time of execution or a change or to understand the mood, or the form or the essence of how to execute a piece; it could be animato or agitato or dolce or, as indicated, sostenuto (Treccani, 2021; Gendler, 1998). Perhaps this use of the Latin term *sustinere*, is the one that could best explain to which operative the world of business, production, ecology, economy and the social should turn its gaze in search of sustainable society; *sostenuto* in music is the slow *tempo* or also *meno mosso* or *ritenuto*, less moved or retained, a musical *andamento*. The slowing down of the speed but that implies to sustain the sounds, not to let them fall, to give them all their time and at the same time their weight, their force and impetus, the notes maintained for their entire value. As Beethoven (1801) indicated in the piano sonata No. 14 in C sharp minor, noting Adagio Sostenuto in the first movement, thus indicating the mood, the emotion that should be impregnated in the execution and highlighting it with the indication of *Suonata Semper pianissimo Senza Sordino*, that is to say, always executed without deafness, without the piano parts that mute the sound and if they are not used, the note resounds in all its sonorous amplitude in time. It is about recovering the *tempo*, that lost time (Proust, 2017), not a useful time, nor historical, nor social, but an inner time, of the soul, of the experience of the intelligence and the spirit, which receives and transforms the data of the sensory experience, a lost human experiential time, and which has been the title of an important approach to economic and resource level, innovation and technology raised at the Lima International Forum (Sagasti, 2011). Peter Kreeft (2016) also marks his reflections on Pascal's Thoughts (2014), with a question about why today no one has time, where has time gone; his answer is that acceleration and hyper-production, hyper-consumption, hyper-occupation, and lack of time are the human way of silencing the anguish of the deepest questions about the meaning of what is done (Kreeft, 2016).

As first glimpses of necessary change there is a latent beginning of a need to interrupt that acceleration and recover the tempo. The culture of the slow movement, born with the idea of slow food in 1986, in Rome at the Spanish Steps in protest at the opening of the first McDonald's (Petrini, 2003) and which has moved on to slow business, slow cities or slow tourism (Gonçalves Rodriguez et al., 2020) and to the slow movement in the educational system with didactic proposals of slowing down to learn to "waste time" (Zavalloni, 2011), the creation of the pedagogy of the snail, of slow education, a rebellion against speed (Sánchéz-Serrano, 2021) and against the imposition of preset programmes shaped with an excess of information, without the time to assimilate it and develop a critical spirit. All these are examples of the need for change that is beginning to appear in the media and in corporate communication, presenting slowness as an added value, as an alternative to the excess of production and its speed. There are advertisements recently broadcast in Spain that speak of the recovery of the slow tempo, one of them Casa Tarradellas, Masa madre de fermentación lenta (Tarradellas, 2021); even while being proposals more in the field of brand positioning than of a real transformation in forms of production and consumption, the entry of time and slowness as a value shows the beginning of a change.

For the company, sustainability is to focus on cooperations, (Cepal, 2000) to move away from competition in terms of prices, or even consider lower profits, to strengthen the social context in which it operates (favoring, for example, the community) and, consequently, its own sales and labor market in favor of the EBC model of Economy for the Common Good (Sanchis et al., 2021). A tool to measure the sustainability of a company is created based on a proposal by Vienna University professor Christian Felber and called the Common Good Balance Sheet, which measures social, ecological, democratic, and distributive justice performances, in which the need to recover time is also alluded to (Felber, 2015). Social sustainability affects the responsibility of rulers and companies in ethical but also economic terms: child in Africa is not socially sustainable (ILO, 2021) and in the long term it is not economically sustainable either. However, employing adults and introducing children to school education has a positive impact on companies and governments in both the short term and the long term. The positive impact manifests itself immediately in ethical performance, brand communication and corporate commitment to sustainability as a core value (Aastha and Shazi, 2019); in the long term, the social and economic benefits become evident by entering the sustainable economy and resulting in new innovative goods and services opening new areas of business and opportunities for economic success (Drela, 2020). It is to downgrade or discard what is immediately useful in favour of sustained/sustainable profit over time. It is clear for the company the three levels of sustainability (ecological, economic, and social) are intermingled and may even conflict, but in the conflict lies the resolution towards the common good in the long term.

The company's involvement in sustainability, its distancing from what is immediately useful and the search for profits over time needs to be supported internally by all its human capital (Vergara-Romero et al., 2021) and externally communicated to receive social support. The current social mistrust, generalized towards public and private entities with respect to sustainability due to the inequalities still evident in many latitudes, does not contribute to a better understanding of the communicative attempts and their development as a lever for action and change (Viñuales et al., 2021); a vicious circle is created in which for too many years the useful, the tangible, the measurable, the benefit, the individual or group profit, has prevailed on the common good, ethics and, of course sustainability focused on the human being as an intangible asset.

To break this vicious circle of mistrust, research could play a key role since, through it, with the use of appropriate methodologies in terms of deepening, interdisciplinarity and especially development time, could revert on the company in the knowledge and dissemination of sustainability, increasing the rooting of this and its subsequent transfer to society as a process of exchange and social appropriation of knowledge for social transformation (Urrego et al., 2021), offering texts of analysis of study of results and approach to multiple realities affected by sustainability policies, seeking company/university collaboration through research (Calafell et al., 2021) to then revert to society. The company without research and scientific dissemination could have greater difficulty in achieving the transfer, both internally and externally, of its sustainability policies and changes in the value of unquantifiable invisible heritage, since the media at its disposal, both ATL and BTL, also give great weight to quantification, the tangible, data, traffic and audiences that, through the digital ecosystem, are measured live, online, modifying the content itself based on the number of viewers and forgetting that behind all the data are the people (Quintás-Froufe et al., 2021). Therefore, research could function as a bolt between companies and society to support the achievement of the implementation and dissemination of sustainability policies, if the methodologies were appropriate and its contents could be given the value and presence of the intangible, non-quantifiable. There are examples of research with the object of study of intangibles that employ experimental methodologies with research designs based on the "case study" supported by the qualitative method (De Freitas, 2021), but finally with the intention of providing techniques and tools for the tangible measurement of the valuation of intangible assets. Sometimes, therefore, research itself is also being compromised by the quantitative, not only in its methodologies but also in its contents and also in the scientific production itself, in the pressure of the quantification of scientific results and their quantification in data through citations and the demand for a high quantity of scientific production as positive valuation factors and research quality that lead to an increase in stress due to the pressure of the academic career for publication (Gómez, 2004). These are numbers that supposedly reflect the transcendence of facts and actions, but in the end these studies could become an end in themselves to achieve purely academic measurement achievements, limiting themselves to accounting and leaving no social footprint, nor contributing to the realization of an action and a change.

Just as the company has difficulties in communicating its commitment or its steps towards greater action towards sustainability, research itself, and that on communication or on company communication, can suffer from the same ills. The supremacy of quantitative research with the application of criteria for the search of data quantity, with the use of new technologies and digital tools, such as info metrics for data retrieval (Musiño & del León-Alvarado, 2021), to finally conclude with evidence that sometimes only in the data itself finds its meaning, is distancing many researchers from exercising the logic of human thought and also from direct, experiential and emotional learning that could give as much light or more and revert positively and with fertility both in research first, and then in society.

The risk is to apply research with only quantitative methodologies, applying numerical and qualitative data, despite the efforts of analysis (Van del Waal & Thijssens, 2020), specialized and fragmentary, of watertight disciplines that can create distances between the numerical theoretical and the real experiential, such as the gap between organizational sustainability and sustainable development (Dueñas-Ocampo et al., 2021), because they arise from different stagnant areas of knowledge, the first from the social sciences, management, sociology and economics, and the second from the biological sciences, ecology and geography. Non-interdisciplinary methodologies may prove to be invalid for the study of the more complex human dimension, of its need to understand multiple social, ethical, economic, environmental, or philosophical factors at the same time, fundamental in the study and development of business communication, especially in relation to intangibles and human-centered sustainability for its subsequent transfer to society.

2. Methodology

In the specific case of research in the field of business communication and intangibles related to sustainability, numbers could distort reality and not provide value on the future of companies, as they can pervert their meaning and their role as positive agents of social transformation and operational action towards sustainability. Let us not forget that the true role and meaning of research is not, through quantitative articles, to turn research into a means of data collection and distribution, but to contribute to pure knowledge and thus truly revert to social improvement.

2.1. Interdisciplinary methodology in Business Communication in the context of methodologies

The main methodology used in the studies conducted on Corporate Communication is an 80% quantitative type sometimes without sufficient scientific rigor in data collection by sampling (Marchi, 2018); however, in a very changed business landscape accelerated by the pandemic, this type of methodology might not shed enough light on the meaning of Corporate Communication itself, nor on its real social contribution in the field of intangibles related to human-centred sustainability. At this point in time, the role of companies with respect to sustainability can no longer be measured only in quantifiable results, nor as individual companies, nor can intangibles be translated only into accounting value (Lira, 2022) to continue to maintain the dynamics of profit and utility within business performance. The study analysis and therefore the methodologies must be able to understand the network in which the company is included and its set of capabilities and relationships with other companies, organizations, and their publics (Cuomo, Tortora, & Metallo, 2012), in addition to its ultimate purpose of relationship with the environment, society and the individual human being. It would therefore be useful to employ research methodologies capable of exploring groups of companies and stakeholders, always conducting interdisciplinary research in which quantitative analysis is complemented by qualitative analysis and this from different disciplines and areas of knowledge, including philosophy or theology.

The conviction that scientific work was fundamentally based on the need to convert any science into numbers, to quantify everything, began with Positivism (Comte, 2021; 1844); the following centuries have only exacerbated this trend that with the twentieth century, the era of the internet and especially of big data has manifested itself in all its accounting necessity. The intrinsic conclusion is reached that quantification is the only true way to be able to study any reality.

The main methods used are quantitative, which end up even measuring the qualitative, and increasingly flooding studies in Social Communication in general and Corporate Communication research in particular. For example, there is an abundance of studies monitoring the social channels most heavily used by Corporate Communication: Facebook, Instagram, LinkedIn, Twitter and YouTube (Hootsuite, 2020). The methodology used starts from the search for pages, hashtags, content, and data on reactions and followers..., any aspect related to the object of study, starting from a direct reading to identify the topics of interest and then quantify them. Quantitative analyses are mostly performed on the data obtained.

In the specific field of study of methodologies used in the research of Intangible Communication, the various investigations that have been developed both nationally and internationally often focus their analysis on the link between the management of intangibles and the economic and financial results of organizations (Borrás & Campos 2015). This newly quantitative interest produces the need to study the models which allow the measurement of intangibles to be implemented and to incorporate them in the methodologies to value management models (Baladrón-Pazos et al., 2017). The increase in the need for the development of methodologies in Social and Business Communication that provide measurable, quantifiable, and tangible results is directly proportional to the growing number of research studies dealing with intangibles, due to the growing interest in intangibles. In September 2021, global intangible assets are worth more than $74 trillion; this represents a growth of 1145% in 25 years, approximately 11% per year (GIFT, 2021). From this value we can deduce the growing emergence of research and methodologies that seek to answer, measure and understand this aspect of the so-called invisible heritage (Quirama & Sepulveda, 2018). In-depth interviews continue to be used as primary sources, as well as focus groups, which are complemented by the review of reports, articles and professional documentation, in order to know the state of the question (Fontán-Gallardo et al., 2021), but their presence is not significant. The new tools allow research to advance with methodology that can yield data and numbers, based, for example, on the use of online questionnaires such as those used by the annual ECM study (Zerfass et al., 2021) and that allow in a very short time to obtain numerous responses in very different realities and contexts applied to the object of study to be analyzed (2021) and that can be immediately translated into data and numbers and quantified. The survey uses instruments that include dichotomous, nominal and ordinal response scales; through databases, thousands of professionals can be reached, as in the case of the latest ECM report (2021), which impacts 15,000 communication professionals throughout Europe. In addition, the data collected can then be subjected to an initial analysis using statistical packages such as SPSS in the social sciences. In the case of the ECM report (2021), for example, a regression analysis is applied to develop and test linear prediction models for the selected variables and effects. The results are subjected to statistical significance tests, depending on the variable, Chi, ANOVA / Scheff's post-hoc test, independent samples T-test, Pearson's correlation, or Kendall's rank correlation (2021). In addition to these studies in which technological tools provide a multitude of data, some research in Corporate Communication and Intangibles focuses on literature review, with the collection of information on Corporate Communication and invisible heritage, through the review of documentary sources such as reports, chapters or articles that are then classified and assessed in their rigor and suitability (Betancurt, 2019; Durán Bravo et al. 2021). There are also case methodologies with the application of the qualitative method of experimental type as the real options methodology to value financial investments through intangibles that approach the risk and the real value of the possible execution of projects (De Freitas, 2021).

The application of real options methodologies in which the measurement of intangibles is an important part, also have examples in which they have been integrated and complemented with other techniques such as scenario planning with the Pay-off method and the 2x2 scenario matrix technique (Favato & Vecchiato, 2021). All these applied methodologies are valued and analyzed in research studies that identify their work with them. Numerous studies base their research work on identifying methods for evaluating the performance of intangible assets. Some rely on the work of Thésaurus-Bercy to propose a very practical evaluation of the cash flows generated by intangible assets and their performance. The Thésaurus-Bercy approach consists of considering the value of an asset as a function of several variables (Kagambega, 2021). Other research studies adopt the study of the application of models such as the Random Forest or the Support Vector Machine, implementing them with traditional statistical methods. These studies also aim to confirm how intangibles represent a valuable competitive advantage (Pechilivanidis et al., 2021). Also, in others, applied methodologies such as shadow prices (Shakina et al., 2021) are adapted to quantify the cost of intangibles, obtain the monetary value and contribute to the methodological advancement of the evaluation of intangible resources of companies. The interest is focused on studying how intangible aspects such as intangible capital can give value (Ezzahra Anaya, 2021). The aim of this research is to try to understand the value of companies beyond their tangible assets and those that can be read in financial and accounting reports.

Aspects such as talent, training, research, development, reputation, credibility, social responsibility and the impact of a company on its environment could be left out of studies that do not take into account intangibles. The application of different methodologies, such as Interbrand, to optimize them and thus better assess the weight of intangibles, intellectual capital, or the reputation of a brand (Melovíc et al., 2021), try to alleviate this possible lack of non-accounting of the uncountable, the immaterial. That which until recently was considered as intangible and not considerable, such as the leadership culture, the diversity among the qualities contributed by the different generations, genders and people to the management (Benavente & Buonomo), is studied as something that has a substantial impact on the company and transcends it.

The intangible, invisible assets of companies are growing and have experienced an acceleration during the Covid-19 pandemic and post-pandemic, which have brought to light the fact that the cultural values of organizations weigh and are stronger than the rest of the assets (Frimousse & Peretti, 2021); questions about how, why and what for, have come to the forefront much more than the what, that is to say that the mission could be moving to a second term, with respect to the vision. Questions such as how to maintain social ties, the feeling of team in the distance, how to fight against isolation and how to achieve a higher level of solidarity, or how to encourage commitment, have become of vital importance in the business environment. Everything related to the culture, thinking and intellectual capital of a company has taken on a new importance after the crisis and must be investigated in a new way, moving away from the purely quantitative. However, also with respect to intellectual capital, most research focuses on numerical representations (Michalak, 2021). This type of quantitative research with respect to the inapprehensible, is useful in the transfer of knowledge for financial analysts, shareholders and managers in decision making, considering the performance and value of intangibles. It would remain therefore to be able to analyze, to investigate in a non-quantitative way and to confront the social value and the motivation of origin of the interest in the study of the invisible capital and its subsequent communication to verify the real weight of this change of business valuation in human existence.

To realize this other approach will require interdisciplinarity (Franco & Morillo, 2021), from the humanities, philosophy, anthropology, together with business research and applied methodologies. It would be a matter of taking the object of study out of a purely physical observation of the intangible and stop limiting it to its translatable aspect in accounting and numerical terms; it would be a matter of searching for the origin of the cause of this explosion towards the immaterial and studying the consequences in business communication and research methods, in order to be able to approach intangibles from a broader idea in which to understand their social impact on development and sustainability centred on the human being.

2.2. Quantitative analysis: the most used data collection parameters

In most research in corporate communication and the study of intangibles, with the application of quantitative methodologies, the parameters most used to collect data are the following:

- Number of fans and followers of a page. The number of fans and followers is the first parameter that helps to understand the state of Corporate Communication of a company on a page or social network, but it is also the first data that must be contrasted through non-quantitative methodologies.
- Number of posts on a page or channel. This data about the number of posts is a good indicator to understand the communication strategy adopted by the company, in addition to measuring the activity status of a given page. It is also possible to find out which posts receive more traffic and therefore more attention from users, although it must be contrasted.
- Number of reactions in social media and social network. The implementation of social media and social networks through the reaction

buttons Like, Love, Haha, Wow, Sad, Angry in Facebook and Like, Celebrate, Love, Insightful and Curious in Linkedin on the one hand has facilitated the count, but on the other hand facilitated a possible error.

- Number of comments. This data marks the participation of the community, but to be able to evaluate the impact adequately, it must also be analyzed qualitatively.
- Number of shares. This data could also be significant in the popularity index – the more shares, the greater the popularity – but it would also be necessary to measure how many of these are shared by a positive adhesion to the shared content and spontaneously.

If in the 19th century Positivism meant the supposed liberation from transcendence and induced the sciences to operate only before tangible and measurable material, the 21st century is demonstrating that it is, however, really the intangible that gives the true value. Corporate Communication Research is now struggling to find new methodologies to respond to more complex realities. In a business landscape greatly changed by new technologies and digital acceleration, Corporate Communication finds itself inserted in a reality full of variables.

2.3. Criticism of data and purely quantitative analysis

Methodologies based on numbers alone can lead to numerous errors since they can even pervert the meaning or value of these in the context of Corporate Communication as a whole and in relation to the ultimate aims of the study of Corporate Communication in relation to human needs.

- The number of fans and followers may not be valid data to conclude the state of health of the Corporate Communication of a company because it is easily manipulated, considering the ease of creating a campaign to get likes or followers. It would therefore be data built by an induction by the company through a communication campaign, which once again would not reflect a spontaneous interest, and if these data are analyzed after a certain campaign, the result could differ substantially.
- The traffic data of a post should also be qualitatively qualified, since traffic is not always synonymous with consent to the contents and does not always occur spontaneously, which, in this case, would demonstrate a real interest.
- The high number of reactions is not an index, an indication of high acceptance, since a qualitative analysis is needed to determine whether the popularity or high diffusion of a post also corresponds to a positive acceptance of its content. Reactions, both negative and positive, must also be analyzed qualitatively to determine whether Angry, Haha, or a Love are for the writer of the post or the content itself or for the company. There have been cases in which a post received many Haha, but they were ironic or in another a high number of love, but they were for the ambassador who starred in a campaign; it must be possible to study in context all this series of variables of emotions and human reactions which are difficult to analyze with the simple action of a push

button: a manual qualitative analysis is needed to understand the true meaning.

- The number of comments can also be determined and encouraged by campaigns in such a way that the data of the number of comments could be falsified; in any case the number of comments itself is not an indicator of adherence to the contents of the company. Only qualitative analysis can assess the impact.
- The number of shares can only be valid if the profile of the users who perform the action can be corroborated and if they are authentic and in line with the message.

Fan or follower purchase campaigns can determine not only the presence of the number of fans or followers, but also the number of reactions or shares. Only through a qualitative study of the users' profiles can it be verified whether they are fake profiles, people who have been paid or real followers. Fake or paid users can be real, but completely useless in the real counting of data in relation to Corporate Communication; only a qualitative verification can discover inactive and only active profiles with some Brands and empty for the rest or of real people who have no relation with the brand, with the products and with their messages. It also uncovers real profiles that interact on company pages and tag each other in the comments and that, artificially, constantly and systematically tag each other. All these failures of the data and the quantitative analysis that can be made of them lead to a wrong process of understanding and assessment of Corporate Communication. The purely quantitative methodology can even pervert not only the results, but the ultimate meaning of the communication itself. If the purpose of Corporate Communication is to make known the company's data, results, actions carried out, values, agreements, to increase awareness of them, transparency and increase notoriety and improve reputation, dishonest intervention. Dishonest intervention, carried out by company departments dedicated to media communication and by research studies, also dishonest, can lead to false conclusions and studies. The realization of works using business management methodologies and with technologies and tools to evaluate only numerical results and supporting the contents of the study and the hypotheses, only in the qualification and numerical quantification, will result in a Corporate Communication and a Research on it, totally far from reality, from the real social need and sustainability focused on the human being.

2.4. Qualitative research with quantitative analysis

Corporate Communication Research has seen the need to use qualitative methodologies capable of overcoming some of the shortcomings of quantitative research; qualitative methodology is not an imprecise methodology, devoid of rigor, but it can also collect objective data and through them complement those quantitative data verified and validated in order to obtain a more complete framework to correctly assess the impact and quality of Corporate Communication. Qualitative analysis requires greater human intervention and it is this presence of human thought and analysis that can make it even more accurate than methodologies based on mechanical data collection. As we have seen, there are already numerous digital tools to collect data from social networks automatically, however, it is more reliable to use manual analysis to prevent the aforementioned failures and thus, for example, to work only from genuine data, coming from real and spontaneous profiles and to understand the true meaning of the reactions. The qualitative methodology allows not only to hear the voice of the company, but also to listen to the most present and relevant arguments of conversations, as well as the tone used. The qualitative study of true and spontaneous shares allows to analyze the users' interest, the comments, the engagement they produce and the personal reaction in terms of spontaneous and true interaction with the contents. Evidently, the support in data and quantitative methodologies enriches the qualitative ones; that is why social sciences started to use quantitative methods, looking for a greater rigor in mathematical sciences to obtain irrefutable results. To avoid falling into speculations, reflections or comments without these being corroborated, the social sciences were induced to research through quantitative methods. Hence the need, also in Corporate Communication research on Intangibles and Sustainability, to use and take advantage of instruments that overcome subjectivity, interpretation and that could form a structured scientific body on which to rely in successive studies. Recently, with the Covid-19 pandemic, there has been a kind of social outcry in which it has been thought that scientific research data should be disseminated and made available to the entire scientific community, opening up the possibility of accessing certain platforms on which to anticipate the publication of data before the peer review process. This, however, has entailed a risk not only in the quality of the research, but also in the verification of the data. The question therefore remains unresolved: on the one hand, quantitative and data use studies may not have enough time for analysis and corroboration or even lead to substantive errors; on the other hand, qualitative analyses may fall into subjectivism and fail to bring light and real social improvement of change in the context of study. Moreover, due to the growing tendency to identify science and scientific study with numbers, qualitative methodologies have made a great effort to be translated into numbers; on the other hand, the attempt to compensate for the quantitative with qualitative analysis, in order to overcome the huge amount of data available in Business Communication, but about which not much is deeply known. Therefore, it was clear that quantitative and qualitative studies separately did not complete the approach to the object of study.

2.4.1. The limits of the qualitative method and the quantitative method

Data obtained through standardized tests or questionnaires with closed responses can be categorized, classified and measured on numerical scales. This type of data collected by applying quantitative methodologies also to the study of Corporate Communication yields results that can be represented in graphs and tables and allows the elaboration of statistics using well-defined parameters. Quantitative research makes it possible to obtain enormous amounts of data and to corroborate or refute certain hypotheses, but as we have already seen, this ability to confirm a hypothesis through the data obtained could represent precisely the limit of this type of research, which would be limited to simply corroborating what is intuitively known. Without detracting from the value of this verification work, in order to generate new knowledge in the social sciences it is necessary to start in search of the unknown, of that which is difficult to measure, of those nuances that constitute the complexity and variability that influence human actions.

Table 1

Substantial differences between quantitative and qualitative methods

Qualitative research	Quantitative research
Based on phenomenology and understanding social facts	Based on natural science and probabilistic induction of referred to statistics
Observation without control	Measurement and control
Considers the subjective aspect of the phenomena	Considers only those aspects that can be measurable, observable and quantifiable
Focuses on the process	Focuses on the results
Does not generalize	Makes generalizations
Global view	Particular view

Note. Source: Own elaboration based on Chaves 2018 Redes. UTACHA

2.5. Mixed analysis and 360º methodologies

In order to overcome the limitations of both methodologies separately, the use of the so-called mixed methodology has already been implemented in the study of Corporate Communication, which uses both quantitative and qualitative methods, putting them in relation. The systematic integration of both procedures in social sciences, within the same study, favors a more complete vision of the phenomenon (Chaves, 2018), and "allows comparing frequencies, factors and results, from triangulation with a greater breadth, depth, diversity, interpretive richness and sense of compression." In recent years, this mixed methodology is increasingly being used in the study of social science phenomena. For its application, this model can follow the 8 steps proposed by Johnson & Onwuegbuzie (2004): 1) Determine the research question. 2) Determine the appropriate mixed design. 3) Select the mixed research design model. 4) Collect the information or input data. 5) Analyze the data. 6) Interpret the data. 7) Legitimize the input data or information. 8) Draw conclusions and write the final report. The justification for the use of mixed methodology is given by the fact first because it allows Triangulation, i.e. the corroboration and convergence of the results of the methods used quantitative and qualitative; second, because they are complementary; third, the discovery of contradictions that can open to rework the research questions; fourth, because the use of both methods helps the further development and deepening of scientific explanations; fifth, because it increases the scope and expansion of the search (Chaves, 2018).

It is also verified, the recent emergence of research laboratories in the field of Business Communication that employ an even more complex mixed methodology, integrated with different disciplines and with a vision from the point of view of the company, of the different actors involved in business development and communication; such methodology, called 360º (Romenti, 2021), to try to overcome the stagnant quantitative and qualitative areas and complement them by taking into account different areas of knowledge, perspectives and points of view on the object of study and making use of new tools for analysis. The 360º methodology is beginning to be used in the business environment for leadership, performance or organizational research or efficiency studies, as well as in the educational environment (Arzate-Ortiz, 2014), where, like the sextant instrument capable of covering all angles of vision, the 360º evaluation model aims to cover all relevant aspects of the educational process, moving away from purely quantitative outcome measurement models (Jiménez-Galán et al., 2010). In the educational environment, this model bases its application on the centrality of the person, how the claim of its application in the framework of research in Business Communication should also focus research on the centrality of the person, especially with regard to intangibles and sustainability centred on the human being. If the content of the research deals with those aspects of the invisible heritage, more complex instruments of analysis are required that are capable of studying them from different perspectives, as in the evaluation of the acquisition of different competencies that cannot be evaluated from a single discipline (Correa et al., 2017). The 360º assessment and the homonymous methodology have the pretension of covering all the degrees of a circle, in which the person or the object of study is placed in the centre and an interrelational and not unidirectional approach is opened. It is no longer the single researcher or the team from a single discipline that confronts the object of study, but an interdisciplinary team that contrasts results and exchanges information among the various agents involved in the communicative fact studied. It is also very useful in the field of Corporate Communication Research to cross-reference the information that can be obtained not only from different methodologies, but also from different perspectives, techniques, theories and informants. This is the work that is already being done in the Corporate Communication Hub (2021).

Another example of application is the case of the GeoClimAlp (2019) research group on glaciers and climate that is using cameras that continuously broadcast live and with a reticular image system that allows collecting data on the changes. The graphic material collected is used by the researchers themselves to study the different phenomena and draw their conclusions, and is the same material shared with users who can interact with it through superimposed texts, hotspots, links and videos, thus instantly promoting scientific dissemination and knowledge transfer. There are numerous examples of research and academic studies in the business field that support their work in the 360º methodology and verify the results obtained by its application in certain companies (Salcedo & José, 2021; Flores-Rodriguez, 2019) in which the analysis of intangibles that make up the invisible capital of the organization, such as relationships, competencies, satisfaction, commitment not only with work, but also with people or the environment, can only be carried out with this type of methodology.

2.6. The 360º interdisciplinary methodology for the analysis of Corporate Communication

The application of mixed methodologies in which quantitative and qualitative analyses complement the approach to the object of study from different perspectives, the interdisciplinary study and the 360º application on topics of analysis within the area of Business Communication and particularly of intangibles related to human-centred sustainability would give the opportunity to research a new development. The 360º methodology began to be theorized in the 1980s in the United States for the use of the multi-source analysis system (Edwards & Ewen, 1996), until it began to be used by companies such as General Electric (Pereira et al., 2008). Part of the success of the use

360º methodologies is due ti their ability to study that which escapes the quantifiable and to promote the individual's departure in order to improve organizations (Bailey & Fletcher, 2002); the feedback, i.e. the feedback, obtained through the multi-sources used allows an overall view on those intangible aspects that concern all the human involved in a given study in which the stakeholders, interest groups involved, are included (Fletcher, 2015). The use of the 360º methodology in the field of the study of Corporate Communication also finds its detractors who question whether the use of the tool for the study of multi-source feedback has a real usefulness in terms of the individual transformation sought and subsequent organizational and social improvement (Smither et al., 2005).

Another issue to consider as a possible limitation, or as a possible alteration of subsequent comparative studies, is that the application of the 360º methodology obtains different results depending on the object and/or subject of study and also the culture and context of each country of application at the international level (Brutus et al., 2006). These methodological limitations have, according to some authors, a clear reflection in the failure of its application itself, where more than analyzing performance, it would be necessary to study how to move from measuring and quantifying results to leading actions (Murphy, 2019). It will be these actions that can later have an impact on change not only in the organization, but also in society. The point is that the use of 360º methodologies is also useful to promote change, as we have seen from the beginning, to influence management through feedback not only on performance, but also on human qualities in relation to support for the development of the environment (Hazuha et al., 1993). The use of 360º methodologies is based on the idea of their usefulness in that through studies of this type, situations, attitudes, skills (Maurer et al., 2002) and finally organizations and the environment can be improved in order to have an impact on sustainability centred on the human being. Sustainability understood in an indispensable way, both outside organizations, in society and the environment, and inside companies, where to develop the sustainability of a working environment based on the intangibles of justice and equity (Karkoulian et al., 2016).

Through the mixed analysis and application of 360º methodologies, the ultimate research questions, the ultimate meaning of any study, the purpose of investigating a certain aspect, in this case, of Corporate Communication in relation to the intangibles that concern human-centred sustainability. The answer cannot be to collect data; research cannot be an end in itself, to simply increase the number of research studies, to increase the number of data of any article, to increase the number of citations.... numbers and data in themselves can be neither the ultimate goal nor the meaning of a research, however in many papers dedicated to Corporate Communication that deep sense of research is lost and it is as if the articles were dropped and it was hoped that someday someone would collect them all as unconnected pieces of a puzzle to finally give them a real use. But that person does not arrive and the scientific production continues to increase, unconnected and lacking in deep meaning.

The interdisciplinary and mixed 360º methodology aims to overcome the loss of meaning in research, and, since it would also include addressing any aspect of scientific research to produce new knowledge and new insights, from the point of view of the philosophy of science, this would help to raise questions about the meaning and purpose even before starting a work. Without forgetting that philosophy was the first science and that even today in many Anglo-Saxon countries the initials P. h. D. refers precisely to philosophy. The discovery of reality, and the philosophy of science is today facing a new role, that of proposing new theoretical hypotheses in an absolute sense and which can be a source of inspiration for new ways of research itself. Stephen Hawking asked philosophers to define the cosmos in its totality and he himself wrote one of his essays with the title The Theory of Everything (2007). The present and the future are composed of physicists philosophers, mathematical logicians and philosophers, philosophers biologists. However, the first Greek philosophers were already physicists and scholars of nature and natural phenomena: think of the pre-Socratic philosophers of nature, Anaximander, Anaximenes and Heraclitus (Wilber, 1984). It would be a matter of creating interdisciplinary research teams to be able to approach the object of study from different angles, using different mixed quantitative and qualitative approaches and then arriving at a joint analysis of the subject, of the object of study from a 360º methodology. A partialized approach from the point of view of a single source of knowledge may not only reduce understanding, but actually disrupt its content.

2.7 A concrete example of the use of the interdisciplinary and 360º methodology in Corporate Communication

In order to find a reliable proof of the methodological study of Corporate Communication, the concrete example of the company Uber has been considered. The CASE study of research on UBER's Corporate Communication is supported by both quantitative and qualitative methodologies, both of which provide relevant data on the object of study. Some of them deal with the business model as an example of change and new techniques for attracting customers through new technologies and applications that act on online commerce (Martín-Payo, 2015). Other research focuses on the management model from the point of view of the sociology of work (Hernández Romero & Galindo Sosa, 2016). Other studies move in the field of the use of data, sometimes fraudulent, by Uber, from the physical and mathematical sciences, and address issues related to Uber's data monopoly (Pérez, 2017). How new information and communication technologies in companies such as Uber are a competitive factor is also studied from the business and new technologies point of view (Bernal-Jiménez & Rodríguez-Ibarra, 2019). Under the point of view of law there are also studies that deal with Uber and its legal framework (Gorriz, 2017). There are studies on Corporate Social Responsibility in Uber and law (Malos et All, 2018). Several articles focus on the collaborative economy and how Uber is an example within the GPN Global Production Network (Grabher & van Tuijl, 2020). Other papers are on mobile computing, new digital organizational forms and the example of Uber (Jordan, 2017). Several studies focus on user perception through corporate social networks such as one conducted on the use of a computational model to explain user perception of Uber on social media (Pournarakis et al. , 2017); this work describes and implements the design of a new data analysis model, consisting of an algorithm to improve the clustering of tweets into semantically coherent groups, which act as an essential prerequisite when searching for prevalent themes and sentiments in large datasets. Another example is a study on analyzing Uber customer engagement through Twitter Analytics (Bijarnia, et al., 2020).
Finally, we are going to analyze a research study which highlights the need for the mixed 360° methodology discussed. After a study on the different analysis models used

in existing research for the measurement of Corporate Communication of the Uber company, the need for the use of a new methodology capable of overcoming the limitations, contradictory aspects and bias of those usually employed is recognized (Nappi, 2019). Instruments such as the RQ Reputation Quotient (Fombrun et al., 2000), to study the reputation quotient or others normally employed, do not really collect numerous aspects such as:

- the use of the contributions made by the stakeholder
- the insertion into the measurement indicators of strategic-business elements, which nevertheless have an obvious impact on reputation
- the lack of flexibility of some models prevents the nuance of deepening

It would therefore be a matter of validating new models of analysis within a mixed 360° methodology that could include elements and aspects of study usually excluded: stakeholders, both external (customers, distributors, suppliers, media, etc.) and internal (employees, managers, shareholders, directors, etc.). This multistakeholder model would provide a richer and deeper perspective of Corporate Communication in general and of aspects such as Reputation or Corporate Social Responsibility or Engagement, much more in line with the complex and varied reality of companies.

Table 2

Weight of each Pillar of Corporate Communication according to each stakeholder

PILLAR	*MANAGEMENT*	EMPLOYEE	SUPPLIER	CUSTOMER
Emotional/ appeal	10%	10%	5%	30%
Vision & Leadership	20%	20%	20%	10%
Economic performance	25%	20%	40%	5%
Product & service	20%	15%	15%	35%
Workplace	15%	30%	19%	5%
Social Responsibility	10%	5%	10%	15%
TOT.	100%	100%	100%	100%

Note. Source: Own elaboration based on Nappi (2019).

In this way, the weight of any element of analysis of Corporate Communication, such as Emotional/Passionate, would have to be calculated from these averages that would change the RQ; if only the customer is taken into account, the RQ is at a percentage weight of 30%, but if the analysis of the proposed stakeholders is taken into account, the different percentages (55%, in this case) should be added up and divided by 5, resulting in a weight of 13.75% (14% rounded) for the Emotional/Passionate element studied compared to the other pillars.

With this 360º perspective, the quantitative analysis of percentages changes substantially with respect to those that only study the impact of any component of Corporate Communication, with respect to only one of these elements. If more and more studies understand that, in addition to the idea that the real customer in terms of the target audience of Corporate Communication is all stakeholders, both external and internal, this further reinforces the need for this type of methodological study approach.

Table 3

Weight of each pillar of Corporate Communication from a multi-stakeholder perspective

PILLAR	WEIGHT
Emotional/appeal	14%
Vision & Leadership	18%
Economic performance	22%
Product & service	21%
Workplace	15%
Social Responsibility	10%
TOT.	100%

Note. Source: Own elaboration based on Nappi (2019).

3. Results

The fact that the percentage of any element studied only from the point of view of the customer, or the other stakeholders changes so much is very significant and only in this way can a true study of Corporate Communication be carried out.
An element that does not usually appear are the media themselves, since, regardless of what can be analyzed in one or the other with respect to the exposure of Corporate Communication in them, they must also be considered as stakeholders, and the media, like political parties, are made up not only of content, audiences and ideologies, but above all of people whose opinions can and must be considered.

3.1. Results of the first phase

There are many variables that must be included in any research study in order not to obtain partial or even worse, incorrect results; numerical, but incorrect. Examples of some of these are:

- Ownership structure (strong or weak family, generalized, managerial) relationships and personalities.
- Malfunction or possible crisis situations experienced by stakeholders; management reaction to such events.
- Word of mouth, or willingness to recommend use of the service to other users.

- Comparison between expectations and actual perceptions of stakeholders.
- Character and behaviour of the manager; Character and behaviour of employees.

3.1.1. Points to highlight

The other methodologies, far from being interdisciplinary, mixed and 360°, cannot reach an understanding of the complex reality that produces and sustains these data. Without considering an integrated analysis with all the knowledge of the different stakeholders. Another aspect to take very much into account, to give full value to people and their action on companies, is the example of incorporating the analysis of the figures and personalities of CEOs, as demonstrated in particular in the case study of Uber. This case study could be applied to all companies in general where it is visible that Corporate Communication is also greatly affected by the richness of human experiences, actions and attitudes and the intangible variables that determine not only the course of it, but also the data thrown on it and finally its impact on the environment and on human-centered sustainability applied both externally to the company and internally.

It is time to overcome silo methodologies and dismembered studies because it is evident that in the analysis of any element, being able to study it from a 360º perspective with mixed and interdisciplinary methodologies can determine a greater depth and approach to knowledge, as well as recover its ultimate sense of social and human improvement. If only one isolated element of a company is studied, the analysis and subsequent transfer of knowledge and social action may be mistaken. If, for example, one wants to study the social responsibility policies of a company and only considers the external public, but not the internal policies in terms of salaries, working hours, treatment, etc., one would not be able to conclude what are the true implications of that company's social responsibility policies for its employees, its managers, etc. It should not be forgotten that any element of the study should be analyzed, as a whole, in all the aspects involved. Social responsibility, for example, affects many aspects, not only external, but also internal to the company. A research study that takes into account only one of these aspects in a watertight manner, without interdisciplinary, mixed and 360º methodologies, would reach erroneous conclusions. It will be of no use for a company to be eco-friendly or to support social actions such as Open Arms or any other that is nowadays considered socially outstanding, if inside, internally, human dignity is disregarded. To consider intangible aspects of Corporate Communication related to human-centred sustainability, it could be very useful to use the methodology proposed in this article.

4. Discussion and Conclusions

On the assumption that Corporate Communication would be an approach that would involve the participation of the communication departments of the companies, the stakeholders, as interest groups, the customers and even, going a step further, the social areas affected, such as the families of the employees, the producers of raw materials, the agents involved from the regulations and legislation, the environmental managers etc., the researchers would require the in-depth study of all the main elements and active agents of these, from the different points of view and disciplines. It would be necessary to apply research with a 360º methodology (HUB, 2021) that could provide an in-depth approach to the elements that act on the data collected, both quantitatively and qualitatively, and thus be able to put into context the reality of Corporate Communication that we wish to investigate. What could be done is the use of mixed methodologies of interdisciplinary 360º, multi-source works, approaching them with multidisciplinary teams with different training profiles and methodologies. This is the case of the Corporate Communication Hub, an observatory dedicated to Corporate Communication, belonging to the CECOMS Research Center of IULM, to conduct and disseminate scientific research on the subject. A mixed scientific committee of professors from international universities and business leaders, work on studies, reports and research, creating synergies between academia and business, and for this purpose they use 360º and mixed quantitative and qualitative methodologies (Romenti, 2021).

This current scenario of social instability aggravated by the recent crisis in Russia and Ukraine has highlighted not only the fragility of predictive research mechanisms, but also the need to find new methodologies for analysis and use of available data to go beyond the purely descriptive/diagnostic to understand exceptional phenomena (Sheng et al., 2021), known as black swan, such as those experienced recently and find new ways of sustainable development and communication of organizational and business involvement in these processes.

A recent example, although prior to the pandemic, would be what happened in Spain in 2019 at Banco Santander. The financial institution was faced with the inability to transmit, convince and communicate the data on the Bank's involvement in environmental problems, its contribution to Social Responsibility and Sustainability; for years it was unable to reach the general public and Corporate Communication in terms of Sustainability and Social Responsibility was not effective (Cendoya, 2020). It was from the decision of the Bank's Communication Director to communicate through ATL media, specifically in a program with a large audience, outside the usual paths of channels specialized in Banking, Economics or Business, when a change began to take place. The decision to communicate through the presence of Ana Botín, president of Banco Santander, in a television program of great audience, with interview and adventure contents -Planeta Calleja (Ruiz, 2020), broadcasted on January 9, 2020; in this program, the president of Banco Santander, participated in a trip to Greenland to see up close, beyond the data, the effects of global warming. In a direct, experiential and human way, aboard a small boat, the president was able to see firsthand the effect of melting ice, and show her concern and support for the cause. The most critical factions analyzed this communicative action as pure image and facade, but the reality is that its potentiality meant a change in the way of approaching the way of transmitting, through real situations, the approach of people, bank managers. Before turning social responsibility actions into numbers, agreed percentages, or Sustainable Development Goals, they should have a human experience and involvement and as such should be transmitted, communicated, and analyzed with 360º interdisciplinary methodologies, using multiple study sources. The programme had more than 9 million views on the network and 2.6 million in prime time with a 19.3% share, according to Mediaset data (2020). This example of Corporate Communication is paradigmatic in the need for the use of interdisciplinary, mixed methodologies, capable of providing a better understanding and response to Social Responsibility, human-centred Sustainability and the transfer of research in Corporate Communication to Social Communication to subsequently influence social change and transformation. Although once again the audience is transformed into numbers and the studies and research and subsequent Business Communication, also the mixed, interdisciplinary ones, are translated into quantifiable, but it should not be its end, nor its content. The need for an ethical Business Communication in itself, and a research also ethical, capable of transforming Communication into common Action, as it is intrinsic in the very etymology of the word Communication: Common and Action, which gives it its deep meaning and role.

Although, in these percentages of share new dangers can be found, since the greed to win audiences or appointments in research and viewers or clicks in communication can have disastrous consequences such as the distancing of the deepening or, even worse, of the truth, to win quotas, the bet should not be lowered. Communication in general and Corporate Communication in particular, although subject to the imperative of numbers and audience, can go against all ethics and even create reputational damage that is difficult to overcome. Considering the audience as several viewers, quantifiable, is visibly again the dictatorship of numbers. The struggle to obtain numbers of citations, visits, clicks, etc. changes the perception of things, leads to errors, and makes us lose sight of what is important. Therefore, the proposal of a 360º, mixed and interdisciplinary study methodology in Corporate Communication is not exempt from the danger of falling into numerical slavery. Its interdisciplinary, multichannel application alerts us to the need for an approach from different points of view of any study phenomenon not necessarily quantifiable and translatable into percentages, but necessarily translatable into ethical research and communicative attitudes, in which the 360º can function as a reciprocally interdisciplinary approach of control over the study of the subject and the conclusions.

This is only the beginning in proposing the use of mixed methodologies, 360º, interdisciplinary, capable of adapting to research in Business Communication for the study of intangibles related to sustainability centred on the human being, with all its variables, its ungraspable and above all immeasurable emotional aspects. The investment required to create interdisciplinary teams, carry out cross-studies and triangulate data, is great; the complexity of analyzing aspects with strong variables and intangible elements greatly hinders the use of these types of methodologies for the study of Corporate Communication; the particular strong disadvantage of the proposed methodology is the need to have much more time for its realization and this can be a major handicap in the economy of the useful in which societies are still immersed. But if the idea that research is the refinement of everyday human thought is recovered – all of science is nothing more than the refinement of everyday thinking (Einstein, 1936) and that such thinking needs to break out of watertight compartments and free itself from the purely numerical and tangible – it will be possible to begin to implement research capable of working with mixed, 360º, interdisciplinary methodologies; otherwise we will continue to run the risk of continuing to provide a scientific production loaded with numbers and emptied of meaning and deep sense, far removed from true knowledge, increasing a flow of a lot of numbers and little substance.

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